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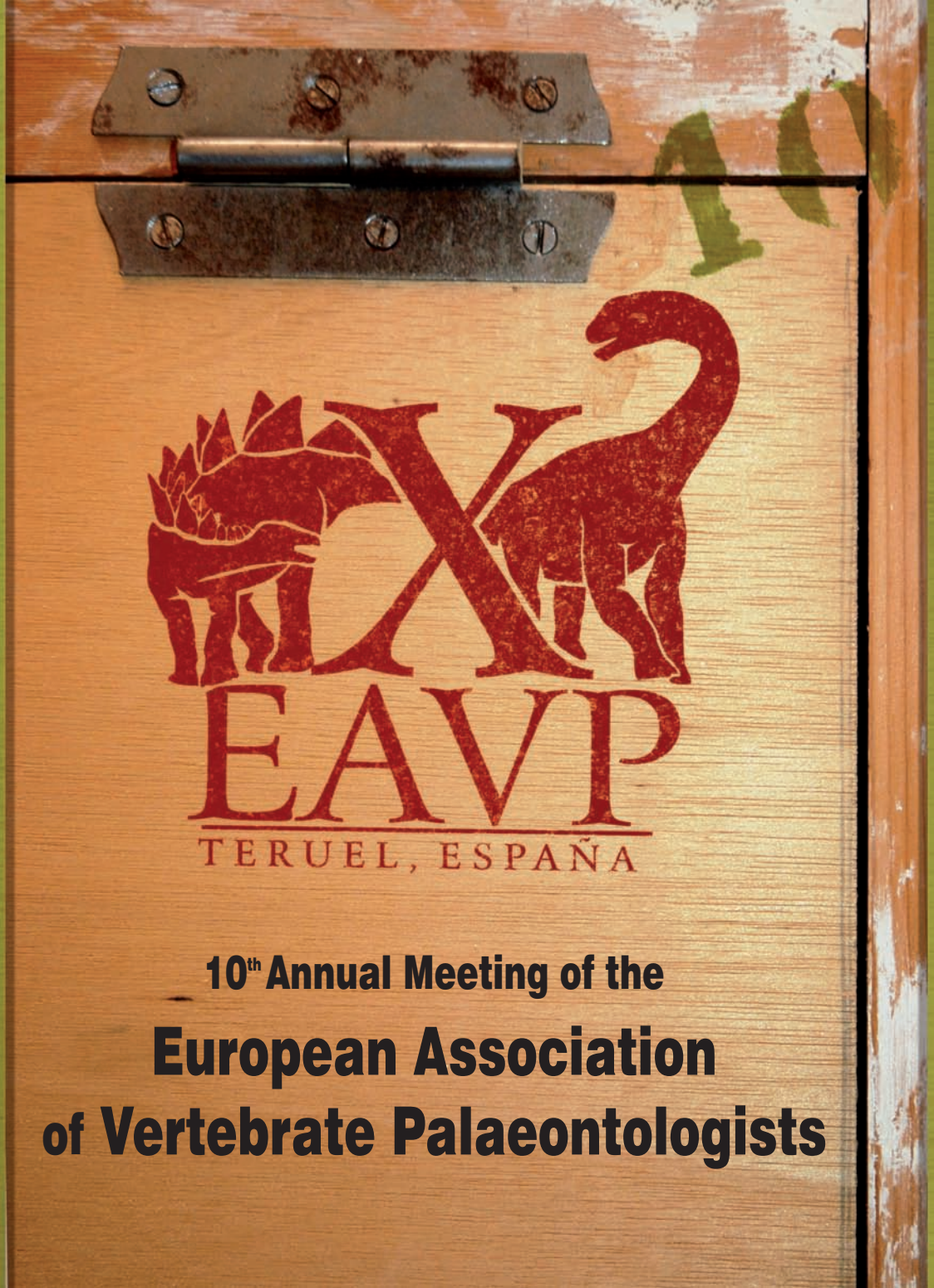

10th Annual Meeting of the

European Association of Vertebrate Palaeontologists


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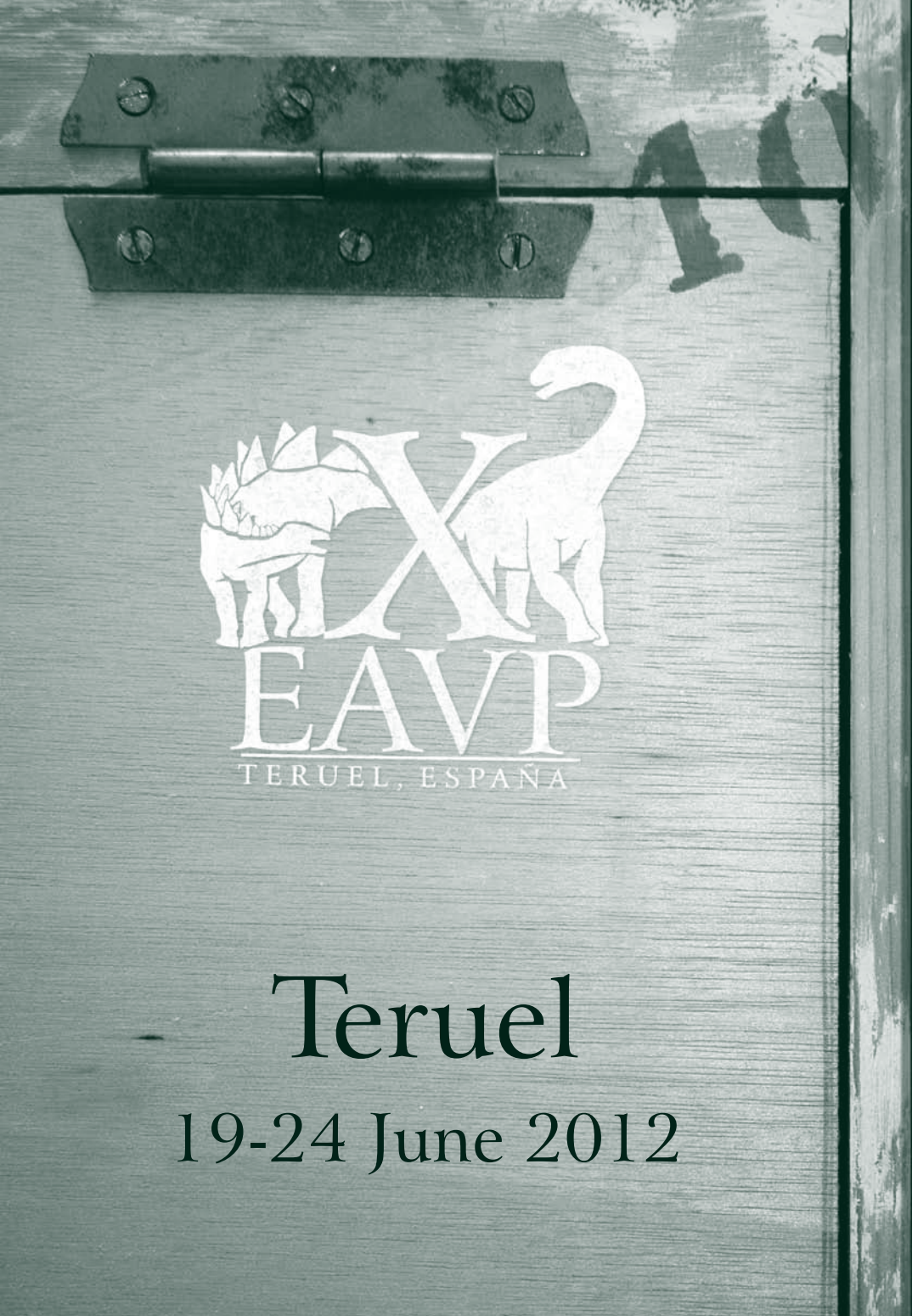

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Reworked remains of mosasauroids (Pythonomorpha, Squamata) in the Pleistocene of Pinilla del Valle (Madrid, Spain)

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Near the village of Pinilla del Valle (Madrid, Spain), three sites in the Calvero de la Higuera (Cueva del Camino, Abrigo de Navalmaillo and Cueva de la Buena Pinta) are famous for their record of Late Pleistocene hominids and other mammals. Much more ancient reworked remains are also yielded occasionally. They consist mostly of shark, ray and bony fish teeth and vertebrae, but several reptile teeth and vertebrae were also found.

Out of the ten vertebrae, five are identified as mid- or caudal dorsals and one as a caudal dorsal. Four are too fragmentary for their original position in the vertebral series to be resolved. The prezygapophyses and the paradiapophyses are projected farther laterally than the postzygapophyses. The prezygapophyseal facets are ovoid and very large. The paradiapophyses bear a simple articular facet. The cotyle is moderately concave; the condyle is convexe, wider than high. Paracotylar, parazygosphenal and zygantral foramina are present in some specimens. In those vertebrae in which the zygosphene is preserved, it is concave cranially and bears two small facets ventrolaterally; the zygantrum has no articular facet. The mid- or caudal dorsal vertebrae have a Y-shaped centrum, whereas the centrum of the caudal dorsal is relatively narrower, more elongate and more T-shaped. All these vertebrae show a non-pathological bone thickening known as "pachyostosis", which is evidenced externally by a bulge on the subcentral borders. These vertebrae match the diagnosis of the basal mosasauroid *Carentonosaurus mineaui* Rage et Néraudeau (2004) and are referred to as *Carentonosaurus* sp., pending further study.

The 15 tooth crowns collected are relatively heterogenous in size and robustness. They are only approximately conical, being laterally compressed to some extent. In lateral views, the curvature of the mesial carina is always much stronger than that of the distal carina (which is almost straight in some specimens). The carinae do not bear denticles or serrations. The enamel surface shows marked baso-apical ridges in some specimens, whereas it is much smoother in others. These shed teeth are tentatively attributed to *Carentonosaurus* and are thus the first dental remains of this taxon described to date.

The age of these fossils is, for the time being, a matter of conjecture. However, it is likely that they were reworked from the surrounding Cretaceous strata, which are Cenomanian to Santonian in age.

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